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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,136	10/08/2003	Edward O. Clapper	42P17690	1349

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER	
NGUYEN, KEVIN M	

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/682,136	**Applicant(s)** CLAPPER, EDWARD O.	
	Examiner Kevin M. Nguyen	**Art Unit** 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1, 2 and 8 are objected to because of the following informalities:

Claim 1, line 3, the word "couple" should be changed --couples--

Claim 2, line 2, the word "my" should be read --by--

Claim 8, line 6, the word "may" should be deleted

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Tomasi et al (US 6,710,770) hereinafter Tomasi.

4. As to claim 1, Tomasi teaches a whiteboard desk display [a quasi-planar sensing 3D system 10, a first embodiment of Fig. 1A], comprising:

a monitor [a display 140];

a whiteboard projector device [a first optical system 20] couple to the monitor for projecting an image on a desk surface [a work surface 40];

a stylus [a stylus 120'] to communicate with the projected image on the desk surface;

a sensor apparatus [a virtual touchpad 50"] to track motion of the stylus on the projected desk image [see col. 5, line 31 through col. 6, line 42].

5. As to claim 5, Tomasi teaches the whiteboard display of claim 1, wherein the whiteboard device is adjustable [the angle of projection of the first optical system 20 is about 50° to 90°, see Fig. 1A, col. 6, lines 3-13].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomasi.

Tomasi teaches the whiteboard display of claim 1, wherein the whiteboard projector device is located on top of the monitor. Tomasi teaches the first embodiment of Fig. 1 which includes the first optical system 20 is not required as a single unit. The triangulation helps determine the shape of surface in a field of view of interest by geometric analysis of triangles formed by the projections, e.g., R1, R2 of two optical systems, e.g., OS1 and OS2 [col. 10, lines 1-32]. However, Tomasi further teaches a second embodiment of Fig. 2B comprising the second optical system 60 (OS2 60) is located at the top of the display device 80 [see Fig. 2B, col. 10, lines 18-33]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine a first embodiment and a second embodiment, e.g., OS1 and OS2, because this would improve the image being projected without effect of ambient light [see col. 9, lines 35-40], while saving power consumption, and cost [see col. 10, lines 45-46].

8. Claims 2-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomasi in view of Tang et al (US 5,239,373) hereinafter Tang.

9. As to claim 2, Tomasi teaches all of the claimed limitation of claim 1, except wherein the desk surface is a whiteboard shared by multiple users.

However, Tang teaches a related whiteboard display which discloses in Fig. 1 showing a two person VideoDraw configuration, it would be obvious to one skilled in that art that a multi-person configuration can be constructed [see col. 5, lines 12-15].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to construct the multi-person VideoDraw configuration as taught by Tang for the intended use in the quasi-planar sensing 3D system (10) of Tomasi, because this would enhance for long distance communication among the workstations that could be handled by a communication network rather than by direct cable hookup (see Tang, col. 5, lines 15-20).

10. As to claim 3, Tang teaches wherein the users have at least two display surfaces. See Fig. 9, disclosing, the operators 25a and 25b have at least one screen of

the display device 66a and one screen of the touch display device 10a. It is noted that alternative embodiments are operating and performing the same functions [see Tang, col. 9, lines 40-55].

11. As to claim 4, Tang teaches wherein the white board device [20a, Fig. 3, communicates to said monitor [a display unit 10, Fig. 3] through a video port [See col. 10, lines 20-34, disclosing, and a table lists "detector to CPU connection cable 30a" coupling to "CPU to video connection cable 32a." It would be obvious to provide inherently a video port for the cable 30a and 32a to connect].

12. As to claim 7, Tang teaches wherein motion of the stylus is tracked in real time by the users [see col. 6, lines 9-15].

13. Claims 8-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomasi in view of Tang.

14. As to independent claim 8, Tomasi teaches an integrated whiteboard assembly [a quasi-planar sensing 3D system 10, a first embodiment of Fig. 1A], comprising:

a computer [a computer col. 6, line 24-25];

a monitor [a display 140] coupled to the computer; and

a projection device [a first optical system 20] coupled to the monitor,

wherein the projection device [20] projects an image on a surface [a work surface 40, see col. 5, line 31 through col. 6, line 42].

Accordingly, Tomasi teaches all of the claimed limitation, except wherein the projection device projects an image on a surface where multiple users share the image.

However, Tang teaches wherein the projection device projects [90a, 90b, Fig. 14A] an image on a surface [88a and 88b] where multiple users [25a and 25b] share the image [see the title, and col. 6, lines 24-28]. It would be obvious to one skilled in the art that a multi-person configuration can be constructed [see col. 5, lines 12-15].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to construct the projection device projects an image on a surface where multi-person sharing the VideoDraw as taught by Tang for the intended use in the quasi-planar sensing 3D system (10) of Tomasi, because this would enhance for long distance communication among the workstations that could be handled by a communication network rather than by direct cable hookup [see Tang, col. 5, lines 15-20].

15. As to claim 9, Tomasi teaches the integrated whiteboard assembly of claim 8, wherein the surface is a desk surface [a work surface 40, Fig. 1A].

16. As to claim 10, Tang teaches the integrated whiteboard assembly of claim 8, further comprising a stylus for communicating with the users. See col. 4, lines 12-15, teaching, a related whiteboard display which discloses in Fig. 1 showing a two person VideoDraw configuration, it would be obvious to one skilled in the art the a multi-person configuration can be constructed. It is noted that alternative embodiments are operating and performing the same functions [see Tang, col. 9, lines 40-55].

17. As to claim 11, Tomasi teaches the integrated whiteboard assembly of claim 10, further comprising a position sensing means for sensing the position of the stylus [a

touch pad 50" detects the coordinates of the stylus 120', see Tomasi, col. 6, lines 30-39].

18. As to claim 12, Tang teaches the integrated whiteboard assembly of claim 8, wherein the projection device communicates to the computer through a video port. See Fig. 3, col. 10, lines 20-34, disclosing, and a table lists "detector to CPU connection cable 30a" coupling to "CPU to video connection cable 32a." It would be obvious to provide inherently a video port for the cable 30a and 32a to connect.

19. As to claim 13, Tang teaches the integrated whiteboard assembly of claim 11, wherein the motion of the stylus is tracked in real time by the users [see Tang, col. 6, lines 9-15].

20. As to claim 14, Tomasi teaches the integrated whiteboard assembly of claim 8, wherein the projection device is adjustable [the angle of projection of the first optical system 20 is about 50° to 90°, see Tomasi, Fig. 1A, col. 6, lines 3-13].

21. As to claim 15, Tang teaches the integrated whiteboard assembly of claim 9, wherein the projected image is a whiteboard image shared my multiple users [see Tang, col. 6, lines 24-28].

22. As to claim 16, Tang teaches the integrated whiteboard assembly of claim 8, wherein each user has at least two display screens. See Fig. 9, disclosing, each of operator 25a has one screen of the display device 66a and one screen of the touch display device 10a. It is noted that alternative embodiments are operating and performing the same functions [see Tang, col. 9, lines 40-55].

23. As to claim 17, Tomasi teaches the integrated whiteboard assembly of claim 8, wherein the projection device is located on top of the monitor. Tomasi teaches the first embodiment of Fig. 1 which includes the first optical system 20 is not required as a single unit. The triangulation helps determine the shape of surface in a field of view of interest by geometric analysis of triangles formed by the projections, e.g., R1, R2 of two optical systems, e.g., OS1 and OS2 [col. 10, lines 1-32]. However, Tomasi further teaches a second embodiment of Fig. 2B comprising the second optical system 60 (OS2 60) is located at the top of the display device 80 [see Fig. 2B, col. 10, lines 18-33]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine a first embodiment and a second embodiment, e.g., OS1 and OS2, because this would improve the image being projected without effect of ambient light [see col. 9, lines 35-40], while saving power consumption, and cost [see col. 10, lines 45-46].

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. NGUYEN whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, a supervisor RICHARD A. HJERPE can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see http://portal.uspto.gov/external/portal/pair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin M. Nguyen

Kevin M. Nguyen
Patent Examiner
Art Unit 2629

KMN
April 12, 2006